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EXAMINER

AHMED, SHEEBA

ART UNIT PAPER NUMBER

1773

DATE MAILED: 04/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/981,166

Applicant(s)

VINCENT ET AL.

Examiner

Sheeba Ahmed

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-55,57-62 and 64-67 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-55,57-62 and 64-67 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Response to Pre-Appeal Brief Request for Review

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action, in the Pre-Appeal Brief Request for Review, is persuasive and, therefore, the finality of that action is withdrawn.

Claims 1-55, 57-62, and 64-67 are under consideration.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 6, 25, and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 recites an improper alternative group, i.e., "selected from the group including....". The Examiner suggests reciting the alternative elements either via a Markush group listing or another proper alternative listing. Improper alternative language is also used in claims 25 and 29. Appropriate correction or clarification is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 1773

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 17-19, 20, 21, 23-25, 34, 36-43, 45, 49-52, 62, and 64 are rejected under 35 U.S.C. 102(b) as being anticipated by Sheridan (EP 0427 507 A2).

Sheridan discloses an addressable display system including a paper sheet comprising a light transparent host layer loaded with a plurality of repositionable elements, the elements being movable from a first orientation in which they present a first visual appearance, to a second orientation in which they present a second visual appearance, and the independent external addressing means which affects the orientation of the repositionable elements (Abstract). The spherical balls have at least two dissimilar surfaces of contrasting colors and differential surface charges (Page 3, lines 9-14). All limitations of claims 1, 17-19, 20, 21, 23-25, 34, 36-43, 45, 49-52, 62, and 64 are disclosed in the above reference.

4. Claims 1-4, 17-19, 20, 21, 23-25, 34, 36-43, 45, 49-52, 62, and 64 are rejected under 35 U.S.C. 102(b) as being anticipated by Sheridan (US 5,389,945).

Sheridan discloses an addressable display system including a paper sheet comprising a light transparent host layer loaded with a plurality of repositionable elements, the elements being movable from a first orientation in which they present a first visual appearance, to a second orientation in which they present a second visual appearance, and the independent external addressing means which affects the orientation of the repositionable elements (Abstract). Upon application of an electric field

Art Unit: 1773

of a given polarity and of a potential higher than a threshold value, the balls line up so that their black sides all face in one direction. When viewed from that direction, the display sheet will appear to be black. Conversely, the polarity of the electric field will cause the balls to rotate 180° so that their white sides face in the viewing direction and the display will appear white (Column 4, lines 14-22). All limitations of claims 1-4, 17-19, 20, 21, 23-25, 34, 36-43, 45, 49-52, 62, and 64 are disclosed in the above reference.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-22 and 36-46 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 5, and 8-12 of U.S. Patent No. 6,947,205 B2. Although the conflicting claims are not identical, they are not patentably distinct from each other.

U.S Patent 6,947,205 B2 claims a switchable medium for visual display comprising an electric field activated molecular system configured within an electric field

Art Unit: 1773

wherein the molecular system rotates in response to the electric field inducing a band gap change. The instant application claims a display comprising a molecular colorant stratum wherein the colorant switches between two visually distinguishable states by exhibiting an electric field induced band gap change.

Accordingly, it would have been obvious to one having ordinary skill in the art to form a display screen claimed in the instant application by using an electric field activated molecular system configured within an electric field wherein the molecular system rotates in response to the electric field inducing a band gap change.

6. Claims 1-22 and 36-46 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-16 of U.S. Patent No. 6,876,570 B2. Although the conflicting claims are not identical, they are not patentably distinct from each other.

U.S. Patent 6,876,570 B2 claims the nominal method of fabricating rewritable media via providing a substrate with a layer of a molecular system of electrochromic switchable molecules wherein the molecules are switchable between two optically distinguishable states.

Claims 1-22 and 36-46 of the instant application, on the other hand, claim an electronically addressable display comprising a substrate with an addressable display bi-modal molecular colorant stratum and an addressing device associated with the molecular stratum to selectively switch the colorant molecules of the stratum between at least two visually distinguishable states.

Art Unit: 1773

Accordingly, it would have been obvious to one having ordinary skill in the art to add an addressing device next to the molecular colorant coating affixed to the substrate, as claimed in U. S. Patent 6,876,570 B2, given that such a device would be needed to selectively switch the colorant molecules of the colorant coating between the at least two visually distinguishable states.

7. Claims 1-55, 57-62, and 64-67 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-19 of U.S. Patent No. 6,853,577 B2. Although the conflicting claims are not identical, they are not patentably distinct from each other.

U.S. Patent 6,853,577 B2 claims a data storage device comprising a substrate with a layer of a molecular system of electrochromic switchable molecules wherein the molecules are switchable between two optically distinguishable states.

Claims 1-22 and 36-46 of the instant application, on the other hand, claim an electronically addressable display comprising a substrate with an addressable display bi-modal molecular colorant stratum and an addressing device associated with the molecular stratum to selectively switch the colorant molecules of the stratum between at least two visually distinguishable states.

Accordingly, it would have been obvious to one having ordinary skill in the art to add an addressing device next to the molecular colorant coating affixed to the substrate, as claimed in U. S. Patent 6,853,577 B2, given that such a device would be needed to

Art Unit: 1773

selectively switch the colorant molecules of the colorant coating between the at least two visually distinguishable states.

Response to Arguments

8. Applicant's arguments filed on December 9, 2005 have been fully considered but they are not persuasive. Applicants traverse the rejection of claims 1, 17-19, 20, 21, 23-25, 34, 36-43, 45, 49-52, 62, and 64 under 35 U.S.C. 102(b) as being anticipated by Sheridan (EP 0427 507 A2) and the rejection of claims 1-4, 17-19, 20, 21, 23-25, 34, 36-43, 45, 49-52, 62, and 64 under 35 U.S.C. 102(b) as being anticipated by Sheridan (US 5,389,945) and argue that both references are directed to microsphere technology whereas the claims of the instant application are directed to "molecular" level elements and not microspheres. However, the Examiner would like to point out that the claim limitations as discussed in the Detailed Description do not provide a definition or a description of what is meant by a "molecular color stratum" and hence the Examiner has interpreted such a phrase in its broadest possible meaning. In other words, the claimed invention as recited is not limited to a single molecule designed to change in structural conformation when an electric field is applied. For example, independent claim 1 is not directed to a single molecule switching between two visually distinguishable states.

Applicants further argue that the term "molecular color stratum" is extensively defined and described. Applicants point to the Detailed Description at paragraph (0054) and the antecedent basis term usage at page 33, line 7 and state that this clearly describes in extreme depth the nature of the individually switchable molecules used in

Art Unit: 1773

the stratum 401 and how each and every molecule serves as a bi-modal, bi-chromic, switchable element. However, the Examiner would like to point out that Page 33, lines 7-10 state that "the present invention, being a colorant stratum 401 at the surface of the display screen 400 (or behind the: protective coating 405) has no such limitation, making it more CRT or HDW like in appearance" and does not provide a definition or detailed description.

Applicants further argue that patents must be afforded consistent prosecution by the U.S. Patent Office as a whole and that the Xerox references were not found to anticipate the common inventor/assignee's U.S. Pat. Nos. 5,866,284 (Examiner Goodrow, J), 6,670,981 (Examiner Hai Pham), 6,806,453 (Examiner Yaritza, G) nor 6,850,230 (Examiner Eisen, A), all of which are issued patents in the series.

In response, the Examiner maintains that consistent prosecution has been afforded to the Applicants in the instant case and that the assignee's U.S. Pat. Nos. 5,866,284 (Examiner Goodrow, J), 6,670,981 (Examiner Hai Pham), 6,806,453 (Examiner Yaritza, G) and 6,850,230 (Examiner Eisen, A) do not contains claims identical to the instantly claimed invention but are merely obvious variants of the presently claimed invention (hence, necessitating the Terminal Disclaimers).


Art Unit: 1773

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheeba Ahmed whose telephone number is (571)272-1504. The examiner can normally be reached on Mondays -Thursdays from 7:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571)272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Sheeba Ahmed
Art Unit 1773
April 25, 2006